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ABSTRACT OF THE DISCLOSURE

[0063] A method for fabricating a dielectric layer provides for use of a carbon source material separate from a halogen source material when forming a carbon and halogen doped silicate glass dielectric layer. The use of separate carbon and halogen source materials provides enhanced process latitude when forming the carbon and halogen doped silicate glass dielectric layer. Such a carbon and halogen doped silicate glass dielectric layer having a dielectric constant greater than about 3.0 is particularly useful as an intrinsic planarizing stop layer within a damascene method. A bilayer dielectric layer construction comprising a carbon and halogen doped silicate glass and a carbon doped silicate glass dielectric layer absent halogen doping is useful within a dual damascene method.